

## ABSTRACT

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## PROCESS FOR THE ANIONIC POLYMERIZATION OF LACTAMS

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The invention relates to a novel process for the anionic polymerization of lactams, in which:

(a) (i) a catalyst capable of creating a lactamate and (ii) a regulator chosen from the amides of formula  $R_1-NH-CO-R_2$ , in which  $R_1$  can be substituted with a radical  $R_3-CO-NH-$  or  $R_3-O-$  and in which  $R_1$ ,  $R_2$  and  $R_3$  denote an aryl, alkyl or cycloalkyl radical, are dissolved in the molten lactam; the temperature of this reaction mixture being between the melting point of the lactam and  $15^{\circ}C$  higher in order to ensure its good stability,

(b) the solution from step (a) is introduced into a mixing device and is then heated to a temperature which is sufficient to obtain bulk polymerization of the lactam in no more than 15 minutes.

(b) is usually a continuous reactor, for example an extruder; however, it can be replaced with a mould.